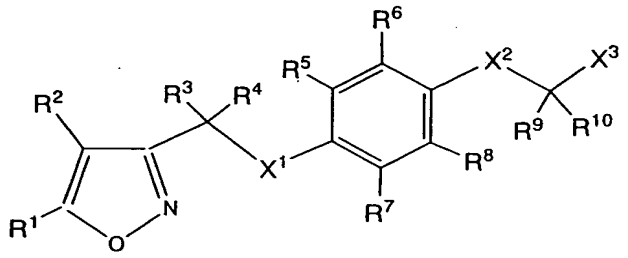
CLAIMS

1. A compound of the formula (I):



(I)

(wherein

R^1 is halogen, hydroxy, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted lower alkoxy, carboxy, optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylthio, optionally substituted acyl, optionally substituted amino, optionally substituted carbamoyl, optionally substituted thiocarbamoyl, optionally substituted carbamoyloxy, optionally substituted thiocarbamoyloxy, optionally substituted hydrazinocarbonyl, optionally substituted lower alkylsulfonyloxy, optionally substituted arylsulfonyloxy, optionally substituted aryl, optionally substituted aryloxy, optionally substituted arylthio or optionally substituted heterocycle,

R^2 is hydrogen, halogen, hydroxy, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted lower alkoxy, carboxy, optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylthio, optionally substituted acyl, optionally substituted amino, optionally substituted carbamoyl, optionally substituted thiocarbamoyl, optionally substituted carbamoyloxy, optionally substituted thiocarbamoyloxy, optionally substituted hydrazinocarbonyl, optionally substituted lower alkylsulfonyloxy, optionally substituted arylsulfonyloxy, optionally substituted aryl, optionally substituted aryloxy, optionally substituted arylthio or optionally substituted heterocycle,

R^3 and R^4 are each independently hydrogen, halogen, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl,

optionally substituted aryl or optionally substituted heterocycle,

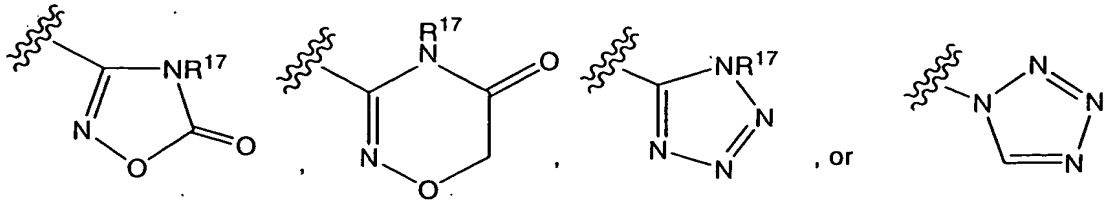
R^5, R^6, R^7 and R^8 are each independently hydrogen, halogen, hydroxy, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted lower alkoxy, optionally substituted lower alkylthio, optionally substituted acyl, optionally substituted amino, optionally substituted aryl, optionally substituted aryloxy, optionally substituted arylthio or optionally substituted heterocycle,

R^9 and R^{10} are each independently hydrogen, halogen, cyano, optionally substituted lower alkyl, optionally substituted lower alkoxy, optionally substituted amino or optionally substituted aryl,

X^1 is -O-, -S-, $-NR^{11}-$ (wherein R^{11} is hydrogen, optionally substituted lower alkyl, optionally substituted acyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl), $-CR^{12}R^{13}CO-$, $-(CR^{12}R^{13})mO-$, $-(CR^{12}R^{13})mS-$ or $-O(CR^{12}R^{13})m-$ (wherein R^{12} and R^{13} are each independently hydrogen or lower alkyl and m is an integer between 1 and 3),

X^2 is a bond, -O-, -S-, -SO-, $-SO_2-$, $-CR^{26}=CR^{27}-$ (wherein R^{26} and R^{27} are each independently hydrogen or lower alkyl), $-NR^{14}-$ (wherein R^{14} is hydrogen, optionally substituted lower alkyl, optionally substituted acyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl), $-CR^{15}R^{16}-$ (wherein R^{15} and R^{16} are each independently hydrogen or lower alkyl) or $-COCR^{24}R^{25}-$ (wherein R^{24} and R^{25} are each independently hydrogen or lower alkyl), and

X^3 is $COOR^{17}$, $C(=NR^{17})NR^{18}OR^{19}$,



(wherein R^{17} - R^{19} are each independently hydrogen or lower alkyl),

provided that,

R^6 and R^{14} can be taken together with the neighboring atom to form a ring,

R^6, R^9 and R^{10} can be taken together with the neighboring carbon atom to form a ring,

R^6 and R^9 can be taken together with the neighboring carbon atom to form a ring,

R^6, R^{15} and R^{16} can be taken together with the neighboring carbon atom to form a ring,

R^6 and R^{24} can be taken together with the neighboring carbon atom to form a ring,

R^9 and R^{16} can be joined together to form a bond,

R^9 and R^{10} can be taken together to form a ring,

R^9 and R^{25} can be joined together to form a bond,

R^9, R^{10} and R^{15} can be taken together with the neighboring carbon atom to form a ring,

R^{10} and R^{15} can be joined together to form a bond, and

R^{10} and R^{15} can be taken together with the neighboring carbon atom to form a ring)

(provided that, a compound wherein R^1 is an unsubstituted lower alkyl, $R^5$and R^7 are bromo and X^1 is -O-, a compound wherein R^1 is an unsubstituted lower alkyl and X^2 is $-CH_2-$ and a compound wherein R^2 is hydrogen and X^2 is -O- are excluded.),

a pharmaceutically acceptable salt or a solvate thereof.

2. The compound of claim 1 wherein R^1 is halogen, optionally substituted lower alkyl, optionally substituted aryl or optionally substituted heterocycle, a pharmaceutically acceptable salt or a solvate thereof.

3. The compound of claim 1 wherein R^2 is halogen, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted alkynyl, optionally substituted lower alkoxy, optionally substituted acyl, optionally substituted carbamoyl, optionally substituted aryl or optionally substituted arylthio, a pharmaceutically acceptable salt or a solvate thereof.

4. The compound of claim 1 wherein R^2 is hydrogen, halogen, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted alkynyl, optionally substituted lower alkoxy, optionally substituted acyl, optionally substituted carbamoyl, optionally substituted aryl or optionally substituted arylthio, a pharmaceutically acceptable salt or a solvate thereof.

5. The compound of claim 1 wherein R^3 and R^4 are each independently hydrogen, lower alkyl or optionally substituted aryl, a pharmaceutically acceptable salt or a

solvate thereof.

6. The compound of claim 1 wherein R^5, R^6, R^7 and R^8 are each independently hydrogen, halogen, optionally substituted lower alkyl or optionally substituted lower alkoxy,

provided that,

R^6 and R^{14} can be taken together with the neighboring atom to form a ring,

R^6, R^9 and R^{10} can be taken together with the neighboring carbon atom to form a ring,

R^6 and R^9 can be taken together with the neighboring carbon atom to form a ring,

R^6, R^{15} and R^{16} can be taken together with the neighboring carbon atom to form a ring,

and R^6 and R^{24} can be taken together with the neighboring carbon atom to form a ring,

a pharmaceutically acceptable salt or a solvate thereof.

7. The compound of claim 1 wherein R^9 and R^{10} are each independently hydrogen, halogen, cyano, optionally substituted lower alkyl or optionally substituted lower alkoxy,

provided that,

R^9, R^{10} and R^6 can be taken together with the neighboring carbon atom to form a ring,

R^9 and R^6 can be taken together with the neighboring carbon atom to form a ring,

R^9 and R^{16} can be joined together to form a bond,

R^9 and R^{10} can be taken together to form a ring,

R^9 and R^{25} can be joined together to form a bond,

R^9, R^{10} and R^{15} can be taken together with the neighboring carbon atom to form a ring,

R^{10} and R^{15} can be joined together to form a bond, and

R^{10} and R^{15} can be taken together with the neighboring carbon atom to form a ring,

a pharmaceutically acceptable salt or a solvate thereof.

8. The compound of claim 1 wherein X^1 is O, S, NR^{11} (wherein R^{11} is hydrogen or optionally substituted lower alkyl) or CH_2CO, a pharmaceutically acceptable salt or a solvate thereof.

9. The compound of claim 1 wherein X^3 is $COOR^{17}$ (wherein R^{17} is hydrogen or lower alkyl), a pharmaceutically acceptable salt or a solvate thereof.

10. The compound of claim 1 wherein R^1 is lower alkyl, optionally substituted aryl

(the substituent is halogen, optionally substituted lower alkyl or optionally substituted lower alkoxy) or heterocycle,

R^2 is hydrogen, halogen, optionally substituted lower alkyl (the substituent is halogen, hydroxy, optionally substituted lower alkoxy, lower alkylamino, optionally substituted imino, lower alkylsulfonyl, optionally substituted aryl or heterocycle), optionally substituted lower alkynyl (the substituent is aryl), optionally substituted lower alkoxy (the substituent is halogen), alkoxycarbonyl, acyl, carbamoyl, optionally substituted aryl (the substituent is optionally substituted lower alkyl or optionally substituted lower alkoxy) or arylthio,

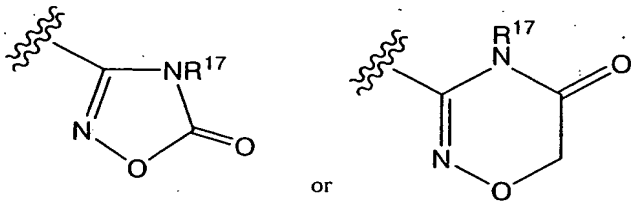
R^3 and R^4 are each independently, hydrogen, lower alkyl or optionally substituted aryl (the substituent is halogen),

R^5, R^6, R^7 and R^8 are each independently, hydrogen, halogen, optionally substituted lower alkyl (the substituent is halogen) or optionally substituted lower alkoxy (the substituent is halogen),

R^9 and R^{10} are each independently hydrogen, halogen, cyano, lower alkyl or lower alkoxy,

X^1 is O, S, NH or CH_2CO, and

X^3 is $COOR^{17}$, $C(=NR^{17})NR^{18}OR^{19}$,



(wherein R^{17} - R^{19} are each independently hydrogen or lower alkyl),

provided that,

R^6 and R^{14} can be taken together with the neighboring atom to form a ring,

R^6, R^9 and R^{10} can be taken together with the neighboring carbon atom to form a ring,

R^6 and R^9 can be taken together with the neighboring carbon atom to form a ring,

R^6, R^{15} and R^{16} can be taken together with the neighboring carbon atom to form a ring,

R^6 and R^{24} can be taken together with the neighboring carbon atom to form a ring,

R^9 and R^{16} can be joined together to form a bond,

R^9 and R^{10} can be taken together to form a ring,

R^9 and R^{25} can be joined together to form a bond,

R^9, R^{10} and R^{15} can be taken together with the neighboring carbon atom to form a ring,

R^{10} and R^{15} can be joined together to form a bond, and

R^{10} and R^{15} can be taken together with the neighboring carbon atom to form a ring,

a pharmaceutically acceptable salt or a solvate thereof.

11. The compound of any one of claim 1 - 10 wherein X^2 is a bond, -O-, -SO-, $-SO_2-$ or $-CR^{26}=CR^{27}-$ (wherein R^{26} and R^{27} are each independently hydrogen or lower alkyl), a pharmaceutically acceptable salt or a solvate thereof.

12. The compound of any one of claim 1 - 10 wherein X^2 is $-CR^{15}R^{16}-$ (wherein R^{15} is hydrogen or lower alkyl and R^{16} and R^9 are joined together to form a bond or wherein R^{16} and R^9 are joined together to form a bond and R^{15} and R^{10} are joined together to form a bond), a pharmaceutically acceptable salt or a solvate thereof.

13. The compound of any one of claim 1 - 10 wherein X^2 is $-NR^{14}-$ (wherein R^{14} is hydrogen, lower alkyl, acyl or lower alkylsulfonyl or wherein R^{14} and R^6 are taken together with the neighboring atom to form a ring), $-CR^{15}R^{16}-$ (wherein R^{15}, R^{16} and R^6 are taken together with the neighboring carbon atom to form a ring, wherein R^9, R^{10} and R^{15} can be taken together with the neighboring carbon atom to form a ring or wherein R^{15} and R^{10} are taken together with the neighboring carbon atom to form a ring and R^{16} and R^9 are joined together to form a bond) or $-COCR^{24}R^{25}-$ (wherein R^{24} and R^6 are taken together with the neighboring carbon atom to form a ring and R^{25} and R^9 are joined together to form a bond), a pharmaceutically acceptable salt or a solvate thereof.

14. The compound of claim 1 wherein R^2 is halogen, hydroxy, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted lower alkoxy, carboxy, optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylthio, optionally substituted acyl, optionally substituted amino, optionally substituted carbamoyl, optionally substituted

thiocarbamoyl, optionally substituted carbamoyloxy, optionally substituted thiocarbamoyloxy, optionally substituted hydrazinocarbonyl, optionally substituted lower alkylsulfonyloxy, optionally substituted arylsulfonyloxy, optionally substituted aryl, optionally substituted aryloxy, optionally substituted arylthio or optionally substituted heterocycle,

R^9 and R^{10} are each independently hydrogen,

X^1 is -O-, -S-, $-(CR^{12}R^{13})mO-$ or $-(CR^{12}R^{13})mS-$ (wherein R^{12} and R^{13} are each independently hydrogen or lower alkyl and m is an integer between 1 and 3),

X^2 is -O-, and

X^3 is $COOR^{17}$ (wherein R^{17} is hydrogen or lower alkyl),

a pharmaceutically acceptable salt or a solvate thereof.

15. The compound of claim 1 wherein R^9 and R^{16} are joined together to form a bond,

R^{10} is hydrogen, halogen, lower alkyl, lower alkoxy or cyano,

X^1 is -O-, -S-, $-(CR^{12}R^{13})mO-$ or $-(CR^{12}R^{13})mS-$ (wherein R^{12} and R^{13} are each independently hydrogen or lower alkyl and m is an integer between 1 and 3),

X^2 is $-CR^{15}R^{16}-$ (wherein R^{15} is hydrogen or lower alkyl and R^{16} and R^9 are joined together to form a bond), and

X^3 is $COOR^{17}$ (wherein R^{17} is hydrogen or lower alkyl), a pharmaceutically acceptable salt or a solvate thereof.

16. The compound of claim 1 wherein R^1 is halogen, a substituted lower alkyl, optionally substituted aryl or optionally substituted heterocycle,

R^9 and R^{10} are each independently hydrogen or lower alkyl,

X^1 is -O-, -S-, $-(CR^{12}R^{13})mO-$ or $-(CR^{12}R^{13})mS-$ (wherein R^{12} and R^{13} are each independently hydrogen or lower alkyl and m is an integer between 1 and 3),

X^2 is a bond or $-CR^{15}R^{16}-$ (wherein R^{15} and R^{16} are each independently hydrogen or lower alkyl), and

X^3 is $COOR^{17}$ (wherein R^{17} is hydrogen or lower alkyl), a pharmaceutically acceptable salt or a solvate thereof.

17. The compound of claim 1 wherein R^9 and R^{10} are each independently hydrogen,

X^1 is -O- or -S-,

X^2 is -NR^{14}- (wherein R^{14} and R^6 are taken together with the neighboring atom to form a ring), -$CR^{15}R^{16}$- (wherein R^{15}, R^{16} and R^6 are taken together with the neighboring carbon atom to form a ring), or -$COCR^{24}R^{25}$- (wherein R^{24} and R^6 are taken together with the neighboring carbon atom to form a ring and R^{25} and R^9 are joined together to form a bond), and

X^3 is $COOR^{17}$ (wherein R^{17} is hydrogen or lower alkyl), a pharmaceutically acceptable salt or a solvate thereof.

18. The compound of claim 1 wherein R^9 and R^{16} are joined together to form a bond,

X^1 is -O- or -S-,

X^2 is -$CR^{15}R^{16}$- (wherein R^{15} and R^{10} are taken together with the neighboring carbon atom to form a ring and R^{16} and R^9 are joined together to form a bond or wherein R^9, R^{10} and R^{15} are taken together with the neighboring carbon atom to form a ring), and

X^3 is $COOR^{17}$ (wherein R^{17} is hydrogen or lower alkyl), a pharmaceutically acceptable salt or a solvate thereof.

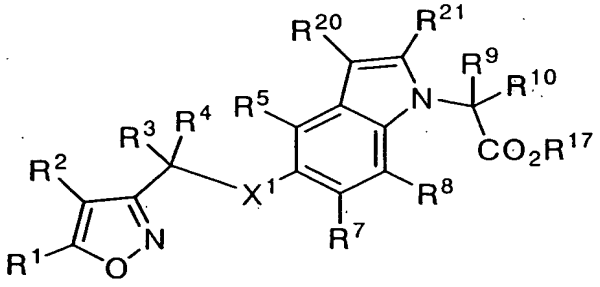
19. The compound of claim 1 wherein R^9 and R^{10} are taken together to form a ring,

X^1 is -O- or -S-,

X^2 is a bond or -$CR^{15}R^{16}$- (wherein R^{15} and R^{16} are each independently hydrogen or lower alkyl), and

X^3 is $COOR^{17}$ (wherein R^{17} is hydrogen or lower alkyl), a pharmaceutically acceptable salt or a solvate thereof.

20. A compound of the formula:



(wherein

R^1 is halogen, hydroxy, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted lower alkoxy, carboxy, optionally substituted lower alkoxycarbonyl, optionally substituted lower

alkylthio, optionally substituted acyl, optionally substituted amino, optionally substituted carbamoyl, optionally substituted thiocarbamoyl, optionally substituted carbamoyloxy, optionally substituted thiocarbamoyloxy, optionally substituted hydrazinocarbonyl, optionally substituted lower alkylsulfonyloxy, optionally substituted arylsulfonyloxy, optionally substituted aryl, optionally substituted aryloxy, optionally substituted arylthio or optionally substituted heterocycle,

R^2 is hydrogen, halogen, hydroxy, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted lower alkoxy, carboxy, optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylthio, optionally substituted acyl, optionally substituted amino, optionally substituted carbamoyl, optionally substituted thiocarbamoyl, optionally substituted carbamoyloxy, optionally substituted thiocarbamoyloxy, optionally substituted hydrazinocarbonyl, optionally substituted lower alkylsulfonyloxy, optionally substituted arylsulfonyloxy, optionally substituted aryl, optionally substituted aryloxy, optionally substituted arylthio or optionally substituted heterocycle,

R^3 and R^4 are each independently, hydrogen, halogen, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted aryl or optionally substituted heterocycle,

R^5, R^7 and R^8 are each independently hydrogen, halogen, hydroxy, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted lower alkoxy, optionally substituted lower alkylthio, optionally substituted acyl, optionally substituted amino, optionally substituted aryl, optionally substituted aryloxy, optionally substituted arylthio or optionally substituted heterocycle,

R^9 and R^{10} are each independently hydrogen, halogen, cyano, optionally substituted lower alkyl, optionally substituted lower alkoxy, optionally substituted amino or optionally substituted aryl,

R^{20} and R^{21} are each independently hydrogen, halogen, hydroxy, cyano, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted

lower alkynyl, optionally substituted lower alkoxy, optionally substituted lower alkylthio, optionally substituted acyl, optionally substituted amino, optionally substituted imino, optionally substituted aryl, optionally substituted aryloxy, optionally substituted arylthio or optionally substituted heterocycle,

X^1 is -O-, -S-, $-NR^{11}-$ (wherein R^{11} is hydrogen, optionally substituted lower alkyl, optionally substituted acyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl), $-CR^{12}R^{13}CO-$, $-(CR^{12}R^{13})mO-$, $-(CR^{12}R^{13})mS-$ or $-O(CR^{12}R^{13})m-$(wherein R^{12} and R^{13} are each independently hydrogen or lower alkyl and m is an integer between 1 and 3), and

R^{17} is hydrogen or lower alkyl), a pharmaceutically acceptable salt or a solvate thereof.

21. The compound of claim 20 wherein R^1 is optionally substituted aryl,

R^2 is optionally substituted lower alkyl,

$R^3$and R^4 are each independently hydrogen or optionally substituted aryl,

R^5, $R^7$and R^8 are each independently hydrogen, optionally substituted lower alkyl or optionally substituted lower alkoxy,

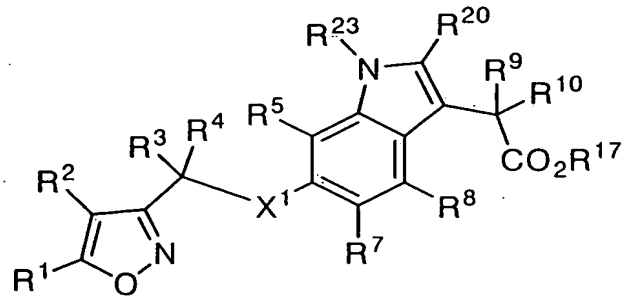
R^9 and R^{10} are each independently hydrogen or optionally substituted lower alkyl,

R^{20} and R^{21} are each independently hydrogen, cyano, optionally substituted lower alkyl or optionally substituted lower alkoxy, and

X^1 is -O- or -S-,

a pharmaceutically acceptable salt or a solvate thereof.

22. A compound of the formula:



(wherein

R^1 is halogen, hydroxy, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted lower alkoxy,

carboxy, optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylthio, optionally substituted acyl, optionally substituted amino, optionally substituted carbamoyl, optionally substituted thiocarbamoyl, optionally substituted carbamoyloxy, optionally substituted thiocarbamoyloxy, optionally substituted hydrazinocarbonyl, optionally substituted lower alkylsulfonyloxy, optionally substituted arylsulfonyloxy, optionally substituted aryl, optionally substituted aryloxy, optionally substituted arylthio or optionally substituted heterocycle,

R^2 is hydrogen, halogen, hydroxy, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted lower alkoxy, carboxy, optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylthio, optionally substituted acyl, optionally substituted amino, optionally substituted carbamoyl, optionally substituted thiocarbamoyl, optionally substituted carbamoyloxy, optionally substituted thiocarbamoyloxy, optionally substituted hydrazinocarbonyl, optionally substituted lower alkylsulfonyloxy, optionally substituted arylsulfonyloxy, optionally substituted aryl, optionally substituted aryloxy, optionally substituted arylthio or optionally substituted heterocycle,

R^3 and R^4 are each independently hydrogen, halogen, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted aryl or optionally substituted heterocycle,

R^5, R^7, R^8 and R^{20} are each independently hydrogen, halogen, hydroxy, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted lower alkoxy, optionally substituted lower alkylthio, optionally substituted acyl, optionally substituted amino, optionally substituted aryl, optionally substituted aryloxy, optionally substituted arylthio or optionally substituted heterocycle,

R^{23} is hydrogen, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted acyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl, optionally substituted amino, optionally substituted aryl or optionally substituted heterocycle,

R^9 and R^{10} are each independently hydrogen, halogen, cyano, optionally substituted lower alkyl, optionally substituted lower alkoxy, optionally substituted amino or optionally substituted aryl,

X^1 is -O-, -S-, -NR^{11}- (wherein R^{11} is hydrogen, optionally substituted lower alkyl, optionally substituted acyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl), -$CR^{12}R^{13}CO$-, -$(CR^{12}R^{13})mO$-, -$(CR^{12}R^{13})mS$- or -$O(CR^{12}R^{13})m$-(wherein R^{12} and R^{13} are each independently hydrogen or lower alkyl and m is an integer between 1 and 3), and

R^{17} is hydrogen or lower alkyl),

a pharmaceutically acceptable salt or a solvate thereof.

23. The compound of claim 22 wherein R^1 is optionally substituted aryl,

R^2 is optionally substituted lower alkyl,

R^3 and R^4 are hydrogen,

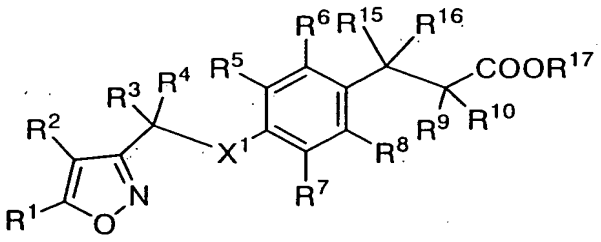
R^5, R^7 and R^8 are hydrogen,

R^9 and R^{10} are each independently hydrogen or optionally substituted lower alkyl,

R^{20} and R^{23} are each independently hydrogen or optionally substituted lower alkyl, and

X^1 is -O- or -S-, a pharmaceutically acceptable salt or a solvate thereof.

24. A compound of the formula:



(wherein

R^1 is halogen, hydroxy, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted lower alkoxy, carboxy, optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylthio, optionally substituted acyl, optionally substituted amino, optionally substituted carbamoyl, optionally substituted thiocarbamoyl, optionally substituted

carbamoyloxy, optionally substituted thiocarbamoyloxy, optionally substituted hydrazinocarbonyl, optionally substituted lower alkylsulfonyloxy, optionally substituted arylsulfonyloxy, optionally substituted aryl, optionally substituted aryloxy, optionally substituted arylthio or optionally substituted heterocycle,

R^2 is hydrogen, halogen, hydroxy, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted lower alkoxy, carboxy, optionally substituted lower alkoxycarbonyl, optionally substituted lower alkylthio, optionally substituted acyl, optionally substituted amino, optionally substituted carbamoyl, optionally substituted thiocarbamoyl, optionally substituted carbamoyloxy, optionally substituted thiocarbamoyloxy, optionally substituted hydrazinocarbonyl, optionally substituted lower alkylsulfonyloxy, optionally substituted arylsulfonyloxy, optionally substituted aryl, optionally substituted aryloxy, optionally substituted arylthio or optionally substituted heterocycle,

R^3 and R^4 are each independently hydrogen, halogen, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted aryl or optionally substituted heterocycle,

R^5, R^6, R^7 and R^8 are each independently hydrogen, halogen, hydroxy, optionally substituted lower alkyl, optionally substituted lower alkenyl, optionally substituted lower alkynyl, optionally substituted lower alkoxy, optionally substituted lower alkylthio, optionally substituted acyl, optionally substituted amino, optionally substituted aryl, optionally substituted aryloxy, optionally substituted arylthio or optionally substituted heterocycle,

R^9 and R^{10} are hydrogen,

X^1 is -O-, -S-, -NR^{11}- (wherein R^{11} is hydrogen, optionally substituted lower alkyl, optionally substituted acyl, optionally substituted lower alkylsulfonyl or optionally substituted arylsulfonyl), -$CR^{12}R^{13}CO$-, -$(CR^{12}R^{13})mO$-, -$(CR^{12}R^{13})mS$- or -$O(CR^{12}R^{13})m$-(wherein R^{12} and R^{13} are each independently hydrogen or lower alkyl and m is an integer between 1 and 3),

R^{15} is lower alkyl,

R^{16} is hydrogen, and

R^{17} is hydrogen or lower alkyl)

a pharmaceutically acceptable salt or a solvate thereof.

25. The compound of claim 24 wherein R^1 is optionally substituted aryl,

R^2 is optionally substituted lower alkyl,

R^3 and R^4 are hydrogen,

R^5, R^6, R^7 and R^8 are each independently hydrogen, halogen, optionally substituted lower alkyl or optionally substituted lower alkoxy, and

X^1 is -O- or -S-,

a pharmaceutically acceptable salt or a solvate thereof.

26. A pharmaceutical composition comprising a compound, a pharmaceutically acceptable salt or a solvate thereof of any one of claims 1-25.

27. A pharmaceutical composition as peroxisome proliferator-activated receptors agonists, which comprises a compound, a pharmaceutically acceptable salt or a solvate thereof of any one of claims 1-25 as active ingredient.